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ABSTRACT

An extensive longitudinal research effort conducted through the Early Childhood Research Center at Michigan State University focused on understanding the forces leading to positive social and emotional development during the preschool years. Because of the rather limited base which was available from other studies for launching such an effort, major attention was devoted within the project to the development of research strategies, particularly instrumentation and analytic techniques which were thought to be appropriate to the dimensions of interest. The two major project phases plus a one-year pilot study each involved thirty-two three-and-four-year-old children divided between two preschool classes, each of which was stratified with respect to three demographic variables. An extensive battery of measures was used for collection of data for this project. Differences in behavior were found and attributed to differences in the teachers' approaches in setting up activities and in initiating and guiding the children's choices of play. (Author/BW)

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A LONGITUDINAL STUDY OF THE SOCIAL DEVELOPMENT OF THREE- AND FOUR-YEAR-OLD CHILDREN IN A PRESCHOOL PROGRAM

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Introduction

Understanding the forces leading to positive social and emotional development has long been of concern to psychologists. An extensive longitudinal research effort conducted through the Early Childhood Research Center at Michigan State University has focused on this aspect of the socialization process during the preschool years. Because of the rather limited base which was available from other studies for launching such an effort, major attention was devoted within the project to the development of research strategies, particularly instrumentation and analytic techniques which were thought to be appropriate to the dimensions of interest. In addition, much groundwork had to be established for the development of the curriculum module and its eventual implementation and evaluation within the preschool programs. Finally, basic information relevant to the profiling of differential socialization patterns for the subgroups under study was obtained during the course of this work.

Theoretical Basis

The theoretical background for this study was from two basic sources--social-developmental research focusing on differential behaviors associated with demographic group membership and social learning literature which provided the basis for the curriculum development. The need for recognition of subgroup differences has been repeatedly emphasized (e.g., Gordon, 1965). Stodolsky and Lesser (1967) posed a critical socialization issue with the question, "What does it mean in psychological process terms to be a member of a given social class or subcultural group?"

The variables of race, sex, and social class were cited early (Hunt, 1961) as basic because of their profound effects on children's intelligence. The most important theoretical contribution of that work and one with considerable implications for this study was undoubtedly the rejection of the old assumptions of the fixed nature of an individual's characteristics and of predetermined development.

The demographic variable under consideration with the greatest background of research is that of sex. Kagan (1964) and Mischel (1970) have reviewed studies concerning the acquisition and significance of sex typing and sex role identification . Although evidences of differences in behavior have been found in very young children, Kagan (1964) concluded that it is around age four when the child has conceptually and functionally divided the world into male and female dimensions and has begun to react accordingly. More pronounced behavioral differences are manifested later, but definite distinctions on the basis of sex have been noted in preschoolers.

The behaviors which have typically received the greatest attention in terms of differential sex-typing have been dependency and aggression. Sex differences in aggression have been noted beginning at about age three, with boys showing more physical aggression and anti-social behavior (e.g., Walters et al., 1957; McCandless et al., 1961; Beller, 1962). Few major differences, however, have been noted at the preschool level in dependency behaviors, although such differences have been indicated in older children (Mischel, 1970).

The variables of ethnicity and social class are somewhat more confusing because studies have too often confounded one with the other. A large number of studies dealing with race and socialization variables have been

concerned with sociometric choices and/or racial awareness. Certainly these factors are pertinent to the child's socialization, particularly for the child from a minority group. The awareness of low-prestige status and its effect on such factors as self-esteem comprise a significant part of the socialization process and may act more immediately upon performance in specific situations (Hess et al., 1968, 1969; Katz and Cohen, 1962; Katz et al., 1958).

Racial awareness has been shown to appear in both black and white children at the age of about three years (Proshansky, 1966). Pertinent experiential factors appeared to have affected attitudes and behavior, as well as performance dimensions. Boger et al. (1968) provided support for positive effects of heterogeneous grouping by race and social class. Other studies have also shown that increased acceptance occurs by virtue of proximity (Gallagher, 1958; Kohlberg, 1967; Lambert and Taguchi, 1956).

The social class variable has received much emphasis with the surge of interest in disadvantagement. Much of this interest has been focused on cognitive dimensions, yet the contributions of social-emotional factors are inextricably bound into performance and behavior. A major study which illustrates this point is the work of Hess et al. (1968, 1969). While cognitive performance was the emphasis of the study, the process variables which were central to the question were affective in nature. The results indicated social class differences in the general areas of maternal life style, control strategies, mother-child interaction, cognitive behavior, and language.

Differences in predisposition to behave toward persons and tasks by children from different social class environments have been reported by

Keller (1966) and Pavenstedt (1965). Other studies have reported that lower-class children in comparison to middle-class peers show greater impulsivity (Kagan, 1964), lower self-esteem (Deutsch, 1965; Kvaraceus, 1965; Sutton, 1960), lower curiosity (Ballif, 1967), and lower task completion drive (Ballif, 1967).

While the full range of subcultural differences that may exist and the particular conditions under which they may be manifested are not clear, it is evident that there are differences in predispositions to behave on the part of preschoolers entering a child development program and that these differences may be a function of such demographic differences. It was toward the further delineation of such differences, as well as the development of specific curriculum to increase positive social skills in relation to them, that the present study was mounted.

Experimental Curriculum

The experimental social skills curriculum has employed two primary approaches. One is the manipulation of the social setting or learning situation which is provided, i.e., the control of new contacts through the structuring of peer situations and the more direct or overt manipulation of social interaction to obtain specific results. The second is the development of, or emphasis on, specific teaching approaches which have appeared to be particularly helpful in facilitating the positive socialization of individual children involved in preschool programs.

The curriculum module was built around seven general goals. Activities were designed to assist the child to:

(1) Become more aware of himself and others;

(2) Develop skill in dealing with the unfamiliar behavior of others;

(3) Develop skill in initiating interactions with others;

(4) Develop skill in responding to the interactive attempts of others;

(5) Develop skill in working with others toward a mutual goal;

(6) Develop the self-control necessary to allow others to continue toward their goals;

(7) Develop independence appropriate to his age level.

Activities directed toward the achievement of these goals are organized around three types of classroom activities: dyadic activities, group activities, and sociodramatic play activities.

The dyadic activities are designed to enable two children to work together without interruption. The two participating children are separated from the rest of the classroom in an area specially equipped for dyadic activities. Initially, both children are supplied with sufficient materials to complete parallel tasks; during subsequent dyadic activities they are supplied with only enough materials to complete a designated task through a cooperative work plan. (An example of a dyadic activity plan is given in the Appendix.)

Group activities occur on several occasions each day in both spontaneous and controlled classroom settings. These activities focus upon the arrangement of programmed social interactions among different children. The use of classroom organizational procedures to arrange for physical proximity and social interaction is characteristic of group activities. (An example of a group activity plan is given in the Appendix.)

Three types of sociodramatic play activities are used as part of the curriculum. Free dramatic play involves no adult supervision other than pre-organization (i.e., the traditional housekeeping corner, store, or doctor's office). Orchestrated dramatic play involves the specification of the children who will participate and the use of props. Manipulated dramatic play involves the teacher's direct participation in the play of specifically selected children to assist these children in gaining particular social skills through reinforcement of their appropriate behavior. (An example of a sociodramatic play activity plan is given in the Appendix.)

Research Design

The research component of this project employed a completely crossed and balanced 2 x 2 x 2 x 2 design. In addition to the treatment dimension, three basic demographic variables--race, sex, and social class--were included as independent variables. The two major project phases (the treatment and comparison groups) plus a one-year pilot study each involved thirty-two three- and four-year-old children divided between two preschool classes, each of which was stratified with respect to the three demographic variables. (The design matrix is shown in Table 1.)

Subjects within a particular cell were assigned to one of the two classes on the basis of several factors. First, an attempt was made to balance the age distribution for the classes. Secondarily, such other factors were considered as number of siblings, ordinal position in the family, and parental occupation and education. In those cases in which a subject was dropped from either the treatment or the comparison group

TABLE 1

Design Matrix

Preschool Class	Demographic Group							
	Lower Class				Middle Class			
	Black		White		Black		White	
	Male	Female	Male	Female	Male	Female	Male	Female
Phase I								
Class 1	2	2	2	2	2	2	2	2
Class 2	2	2	2	2	2	2	2	2
Phase II								
Class 3	2	2	2	2	2	2	2	2
Class 4	2	2	2	2	2	2	2	2
Phase III								
Class 5	2	2	2	2	2	2	2	2
Class 6	2	2	2	2	2	2	2	2

before the scheduled completion of the program, replacement was made with another child from the same demographic group (i.e., race, sex, and social class) who was matched as nearly as possible on other relevant variables (e.g., age, family composition, and previous preschool experience).

Phase I, the preliminary pilot phase of this project, was carried out during the 1968-69 academic year. Phase II, consisting of additional instrument development and experimental research with children in the regular preschool program, was conducted during the 1969-70 and 1970-71 academic years. Finally, Phase III, which involved the continuation of the descriptive research and the development and implementation of the experimental curriculum, was carried out during the 1970-71 and 1971-72 academic years. (A timetable for the total project is shown in Figure 1.)

Subjects were selected by availability sampling within a representative sampling framework. Determination of socioeconomic status was made on the basis of four factors: education, occupation, income, and housing. Selection of children for each demographic group was made on the basis of several factors, with an attempt to obtain a varied and representative sample. Factors considered included age, number of siblings, ordinal position in the family, previous preschool experience, and parents' education and occupations. Low-income children were also selected from particular geographical areas of the city in order to facilitate transportation of these children to the preschool.

	1968-69	1969-70	1970-71	1971-72
Phase I	32 Ss in 2 classes (3-year-olds)			
Phase II		32 Ss in 2 classes (3-year-olds) →	32 Ss in 2 classes (4-year-olds)	
Phase III			32 Ss in 2 classes (3-year-olds) →	32 Ss in 2 classes (4-year-olds)

Figure 1

Project Timetable

Measurement

Overview

An extensive battery of measures was used for collection of data for this project. Both pre- and post-testing were included, as well as continuous measures taken throughout the course of the project.

Baseline Data

Baseline data were collected through a series of four sessions arranged at the beginning of each child's enrollment in the preschool program. At least three, and if possible all four, of the sessions were held before the child began attending preschool classes.

The first session was used for administration of the Familiarization Task (Cunningham and Boger, 1969) for the mother and the child. This session was videotaped, and subsequent rating has been carried out with Form II of the Parent-Child Interaction Rating Procedure (Cunningham and Boger, 1972).

The second session with each child focused on obtaining measures of the individual child's behavior in a number of different structured situations. Included within this session were the Cincinnati Autonomy Test Battery (Banta, 1970), the Inventory of Factors Affecting Test Performance (Bank Street College of Education, 1967), the Binet Rating Scale (Beller, 1967), and the House-Tree-Person Test (Buck, 1966).

The third session again focused on the mother-child dyad. Two sections of the Mother-Child Interaction (Hess and Shipman, 1967) were used--the Toy Sorting Task and the Eight Block Sorting Task. These sessions were videotaped and rated subsequently with the Parent-Child Interaction Rating Procedure (Cunningham and Boger, 1970).

The fourth and final session involved administration of the Father-Child Interaction--Nine Block Sorting Task (Cunningham and Boger, 1969). Again, these sessions were videotaped and were subsequently rated with the Parent-Child Interaction Rating Procedure.

Continuous Observations

Three series of Experimental Play Situations (Boger and Cunningham, 1969) were conducted each year. Each series was designed to include three fifteen-minute sessions for each subject. Each of the three demographic variables (race, sex, and social class) was held constant for one session of each series, therefore controlling it by exclusion. Subjects were assigned to groups of four by random stratification within each preschool class. Subsequent groups were systematically stratified, using a fractional factorial design. Each session was videotaped and was rated subsequently with Form I of the Observation of Socialization Behavior (Boger and Cunningham, 1969). Four and one-half hours of observation in these situations was therefore obtained for each subject during the two years of his participation in the program.

Observations of each child were also made with Form II of the Observation of Socialization Behavior (Boger and Cunningham, 1969) twice each term during free play periods in the preschool classrooms. Each series of observations included four five-minute observations spaced at relatively regular intervals at the beginning and end of each of the three academic terms of each year. The total set of observations for each subject thus included four hours of observations in forty-eight separate observations spaced over a two-year period.

Also collected throughout each term were observations with the Classroom Socio-Observation procedure (Cunningham and Keyes, 1969). Fifteen observations were collected each term, making a total of ninety observations per subject over the two-year period of participation.

Post-Program Measures

At the conclusion of the two-year preschool period for each major project phase, post-program data were collected using several measures. These included the Cincinnati Autonomy Test Battery (Banta, 1970), the Inventory of Factors Affecting Test Performance (Bank Street College of Education, 1967), and the Binet Rating Scale (Beller, 1967).

Analysis

Overview

The data were analyzed through the use of a multivariate model. Since data collection was just completed this summer, only very preliminary analyses have been carried out at this point. Multivariate analysis of variance and multivariate analysis of covariance have been used to compare both treatment and demographic groups on several of the dimensions of interest. In these present analyses, attention has been focused on two sets of variables--those from the CATB and a subset from the OSB. CATB variables include task initiation, impulse control, incidental and intentional learning, response variability, perceptual field independence, persistence, resistance to distraction, activity and verbalization for three tasks (curiosity box, manipulation board, and replacement puzzle), task competence, social competence, and

kindergarten prognosis. Variables from the OSB included in these preliminary analyses are social behavior, affective tone of verbalization, verbal interaction, acceptiveness of responses, initiation, adult interaction, and peer interaction. Although caution must be observed in interpretation of these results because of their very preliminary nature, some interesting differences--and perhaps even more interesting similarities--have been observed.

Treatment Group Differences

Cincinnati Autonomy Test Battery.--A multivariate analysis of covariance on dimensions of autonomy measured by the Cincinnati Autonomy Test Battery was performed to compare performance of those children who participated in the experimental treatment with those in the regular preschool program. Comparison of post-program scores adjusted for baseline measures on those same dimensions reflected an overall difference at the 0.08 alpha level (Table 2). Inspection of the cell means for individual variables indicated that the comparison group had better initial scores on almost every variable. The experimental group, however, had significantly higher scores (univariate alpha level of 0.01) on the post-program measure (adjusted for the pre-program score) for the variable of response variability, or innovative behavior. A marginal difference (univariate alpha level of 0.08) was also indicated in favor of the experimental group on the measure of perceptual field independence.

Several measures of initiation, including task initiation, manipulative exploration, and puzzle board activity, indicated relative decreases by the experimental treatment group children in their tendency toward high activity levels. Although not specifically anticipated, these tendencies

TABLE 2

Multivariate Analysis of Variance
for Treatment Group Differences on
Cincinnati Autonomy Test Battery Variables

Variable	F-Ratio	Alpha Level (Upper Limit)
Multivariate Analysis		
----------	1.7849	0.0843
Univariate Analyses		
Task Initiation	0.9041	0.3469
Curiosity Box Activity	0.1203	0.7304
Curiosity Box Verbalization	0.5724	0.4534
Impulse Control	4.8774	0.0325
Incidental Learning	0.9660	0.3311
Intentional Learning	0.0145	0.9047
Response Variability	6.4344	0.0149
Field Independence	3.1723	0.0819
Manipulation Board Activity	2.8714	0.0973
Manipulation Board Verbalization	0.6942	0.4093
Reflectivity	1.4303	0.2382
Puzzle Board Activity	1.0833	0.3037
Puzzle Board Verbalization	0.2125	0.6471
Persistence	0.8868	0.3510
Resistance to Distraction	0.0249	0.8753
Task Competence	2.7262	0.1059
Social Competence	0.7894	0.3792
Kindergarten Prognosis	1.0262	0.3166

Note.--Degrees of freedom for multivariate analysis = 18 and 27.
Degrees of freedom for univariate analyses = 1 and 44.
Covariates were baseline scores on these same 18 variables.
Multivariate significance of covariates = 0.0456 (X^2 = 368.21, with 324 degrees of freedom).

are particularly interesting in view of the attention devoted within the experimental curriculum to self-control, restraint of aggressive behavior, and impulse control. The treatment children also showed a significantly greater increase in motoric impulse control (univariate alpha level of 0.03), although the initial superiority of the comparison group was still somewhat evident.

The gaps between the experimental treatment group and the comparison group were narrowed on several other variables as well, even though the post-program raw scores of the comparison group were higher. These included the measure of persistence, as well as the three examiner ratings--task competence, social competence, and kindergarten prognosis. Both incidental and intentional learning pre-program scores were higher for the control group; the post-program scores for incidental learning, however, were slightly higher for the experimental treatment group, while little change in the relative positions of the two groups was noted for intentional learning.

Observation of Socialization Behavior.--Rather consistent results were also found with the observational measure used for assessing the children's social behavior. A preliminary analysis was performed with forty-eight subjects using as criterion measures seven scores from the Observation of Socialization Behavior--Form II (Classroom Observations). The subjects used for this analysis were selected from the pool of subjects who were enrolled throughout the entire second year of the two-year program for their respective phases. A completely crossed and balanced four-way design was employed (treatment by three demographic dimensions) with subjects randomly selected from the available pool for

each cell in order to achieve an orthogonal design. The seven scores for each subject for the final series of observations during the second year of participation were used as dependent variables, these same seven scores for each subject for the first series of observations during that same year were used as covariates.

Consistent with the CAT3 data, higher initial rates of initiation were shown by the comparison subjects than by those in the experimental curriculum. By the end of the program, these comparison subjects, particularly the males, increased in relative amounts of initiation; a decrease in relative amount of initiation was evidenced by males in the experimental group, however, while females showed a slight increase. The multivariate alpha level for the sex by treatment interaction was 0.085, with a univariate alpha level of 0.002 for the initiation variable (Table 3).

Demographic Group Differences

Observation of Socialization Behavior.--Very few demographic group differences were shown on either the CAT3 or the OS3 measures. This was particularly true of the social measures in the controlled setting of the classroom and was least true of the more task-oriented individual testing situation.

An analysis of the first series of experimental play situations for the first project phase was conducted using a perfectly crossed and balanced three-way design with thirty-two subjects. A multivariate alpha level of 0.057 was indicated for the sex by social class interaction (Table 4), with the primary contributor to the between-group variance being amount of adult interaction (univariate alpha level of 0.01).

TABLE 3

Multivariate and Univariate Analyses of Covariance
for Sex by Treatment Group Differences on
Observation of Socialization Behavior Variables in Classroom Observations

Variable	F-Ratio	Alpha Level (Upper Limit)
Multivariate Analysis		
----------	2.1704	0.0850
Univariate Analyses		
Social Behavior	0.3601	0.5539
Affective Tone of Verbalization	0.0848	0.7733
Quantity of Verbal Interaction	3.0894	0.0911
Acceptiveness of Responses	1.4221	0.2443
Initiation	11.6613	0.0022
Adult Interaction	1.3314	0.2595
Peer Interaction	1.1102	0.3005

Note.--Degrees of freedom for multivariate analysis = 7 and 19.
Degrees of freedom for univariate analyses = 1 and 25.
Covariates were baseline scores on these same 7 variables.
Multivariate significance of covariates $\doteq$ 0.0260 (X^2 = 70.03, with 49 degrees of freedom).

TABLE 4

Multivariate Analysis of Variance
For Demographic Group Differences on
Observation of Socialization Behavior Variables in
Experimental Play Situations

Source	F-Ratio	Alpha Level (Upper Limit)
Race	1.5570	0.2115
Sex	1.6814	0.1767
Social Class	1.3764	0.2741
Race X Sex	1.2331	0.3360
Race X Social Class	1.2614	0.3228
Sex X Social Class	2.4762	0.0574
Race X Sex X Social Class	0.5704	0.7705

Note.--Degrees of freedom = 7 and 18.

Inspection of cell means indicated that more adult interaction (reflecting greater adult dependency in this situation) occurred for lower-class subjects than for their middle-class peers these differences were much more pronounced for females than for males. The contribution of the social class differences to this interaction was also reflected in a univariate alpha level of 0.004 for the social class main effect, a result which must, of course, be interpreted in relation to the earlier interaction. No other significant differences were noted on this analysis of the demographic dimensions.

Analyses of the OSB data from the classroom observations during the second year of the program reflected even fewer differences (Table 5). There were no significant multivariate tests, but one individual variable, social behavior, had a univariate alpha level of 0.003 for the main effect of race using the scores from the final series of classroom observations. Inspection of cell means indicated that higher levels of social behavior (reflecting a greater social maturity) were shown for black children than for their white peers.

Cincinnati Autonomy Test Battery.--Analysis of the CATB variables (Table 6) indicated that on the baseline measures, a significant difference was indicated for the main effect of race (multivariate alpha level of 0.0428). The primary contributions to the overall group differences were from the variables of social competence (univariate alpha level of 0.0004) and task initiation (univariate alpha level of 0.003). Inspection of cell means indicated that black children had higher scores on both variables than did their white peers.

The post-program CATB Scores indicated only one significant difference for an individual variable on the test for main effects of race.

TABLE 5

Multivariate Analysis of Variance
For Demographic Group Differences on
Observation of Socialization Behavior
Variables in Classroom Observations

Source	Measure 1		Measure 2	
	F Ratio	Alpha Level (Upper Limit)	F-Ratio	Alpha Level (Upper Limit)
Race	0.6823	0.6860	1.5177	0.1947
Sex	1.4414	0.2215	1.4438	0.2206
Social Class	0.5363	0.8008	0.1712	0.9895
Race X Sex	0.5358	0.8012	0.7412	0.6390
Race X Social Class	0.5997	0.7518	1.9393	0.0936
Sex X Social Class	0.8427	0.5602	0.5889	0.7603
Race X Sex X Social Class	0.7276	0.6498	0.7027	0.6696

Note.--Degrees of freedom = 7 and 34.

TABLE 6

Multivariate Analysis of Variance
For Demographic Group Differences on
Cincinnati Autonomy Test Battery Variables

Source	Measure 1		Measure 2	
	F-Ratio	Alpha Level (Upper Limit)	F-Ratio	Alpha Level (Upper Limit)
Race	1.9296	0.0428	1.5476	0.1254
Sex	0.9112	0.5697	1.3647	0.2040
Social Class	1.5338	0.1302	2.3775	0.0118
Race X Sex	0.7515	0.7389	1.0946	0.3924
Race X Social Class	1.3199	0.2288	0.8835	0.5997
Sex X Social Class	0.6858	0.8036	1.4961	0.1441
Race X Sex X Social Class	1.0190	0.4618	1.4149	0.1790

Note.--Degrees of freedom = 18 and 39.

This was response variability (univariate alpha level of 0.005); again, higher scores were indicated for Black children than for their white age-mates.

A significant difference was reflected also on the post-program CATB scores for social class differences (multivariate alpha level of 0.01). The greatest contributions to this overall variance were from the variables of kindergarten prognosis (univariate alpha level of 0.0001), social competence (univariate alphallevel of 0.0002), perceptual field independence (univariate alpha level of 0.001), impulse control (univariate alpha level of 0.003), and task competence (univariate alpha level of 0.01). In each case, more positive scores were obtained by the middle-class children.

Discussion

Results of these preliminary analyses suggest several important implications. Caution must be exercised, of course, in their interpretation because of their preliminary nature as well as the limited sample sizes involved. In addition, the nonrandom selection and assignment of subjects is obviously a limiting factor. The fact that children in the comparison group consistently showed higher scores on initial measures indicates that the two groups were not, in fact, strictly comparable. Even though covariance measures were used to adjust for this lack of equivalence, the interactive effects of these differences with the treatment can only be inferred.

The experimental curriculum focused to a large extent on the development of social maturity through self-control, taking turns, and impulse control, along with such other preschool goals as restraint of aggressive behavior. An interesting trend which was indicated in these results was

the tendency for children in the experimental program to show generally decreased levels of activity, particularly that initiated by that child. While these trends suggest that the children involved are in fact exercising greater control over their behaviors, the situational contexts are not clear. The significantly higher scores of the experimental subjects on the response variability measure suggests that ability to diverge is not necessarily being stifled, but this is the one task where such behavior is specifically requested. Other tasks in which activity level is open-ended show decreased levels, indicating that these children may not be discriminating the behavioral demands of a situation on their own. While there is a very legitimate question as to whether situational assessment of this complexity would be a developmentally appropriate goal, it is nevertheless apparent that such factors need to be taken into consideration both in curriculum design and in measurement techniques.

Failure to find many differences on demographic dimensions was somewhat surprising. However, the observational measures focused on rather basic dimensions of interaction, and the time spans included were rather minimal. While changes were reflected, these did not necessarily reach the level of significance, possibly because of the time factor. The need for longitudinal studies covering an even greater time span, and for long-range followup in studies of this type, is evident.

Possible differences in socializing patterns by families of black children were indicated by the rather consistent indication of higher levels of social development for these children--a finding which was in agreement with subjective evaluation also. The possible lack of comparability along such dimensions as social class between the two samples cannot be overlooked, however.

Another factor which must be considered is the particular preschool setting in which these children were involved. As part of a teacher education program in a large university with very well-established programs both in education and in child development, the laboratory preschool in which this study was conducted is fortunate in having a very sound professional base. The failure to find any greater differences on behavioral dimensions within groups of children in the school setting suggests the degree to which the teachers in the program are able to influence this behavior. In addition, the evaluation of an experimental treatment in a situation where the only contrast is an already strong program makes comparisons extremely difficult. The fact that both treatment groups were in classes that were heterogeneous with respect to both race and social class cannot be overlooked, since this grouping has been shown to be a superior basis for a preschool program (e.g., Boger et al., 1968). It is interesting that social class differences on the more task-oriented measures in the more test-like setting begin to be evidenced by the end of the program even in this theoretically enriching setting. Such tendencies are consistent with the cumulative deficit hypothesis which has been suggested as an explanation for the increasingly low school performance of lower-class children.

While the teacher differences phenomenon is certainly not a new or unusual one, its application here is supported by the results of a similar study by Fagot (1968). This study of the effect of sex of child upon social behavior in a nursery school setting indicated that some differences were in fact evident in the patterns of social interaction. However, the two schools used in the study were found to provide quite different environments and to produce very different social behaviors, in spite of the fact

that both schools drew from similar home environments. The differences in behavior were attributed to differences in the teachers' approaches in setting up activities and in initiating and guiding the children's choices of play. These findings, along with the preliminary results of the present study, lend additional weight to the 'Teacher is the most important variable' hypothesis. Within a range of potential, at least, it may be that differential behaviors of children are noted because they are not only expected to occur but also because the so-called educational settings are provided in which these behaviors are either encouraged or allowed to occur.

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APPENDIX

DYADIC ACTIVITY

Learning Experience: Slide-a-Viewer

Objectives:

1. To help the child develop skill in working with others toward a mutual goal.
2. To help the child develop the self-control necessary to allow others to continue toward their goals.
3. To help the child develop skill in dealing with the unfamiliar behavior of others.

Materials:

1 Slide-a-Viewer (hand-size) battery operated

several slides

1 small table

2 chairs

2 seat pads

Description of slides:

The slides are encased in protective plastic and bordered with an aluminum edging. The specific content of the slides depends upon the teacher's wishes. If animals are the theme for the week the slides could be of animals. If the children are learning the names of their classmates, slides picturing classmembers could be used. Framing the slides is simple and inexpensive.

Procedures:

Place the seat pads on the two chairs and place the viewer and the basket of slides on the table. Explain to the children that if they want to look at the pictures they must get a friend to sit down with them. If one child leaves, the pictures cannot be seen and another friend must be found to share in the slide viewing activity.

GROUP ACTIVITY

Learning Experience: Juice Time

Objectives:

1. To help the child develop skill in dealing with the unfamiliar behavior of others.

2. To help the child develop skill in initiating interactions with others.

3. To help the child develop skill in responding to the interactive attempts of others.

Materials:

one basket of tags (8 red, 8 white)

identical tags taped to chairs (8 red, 8 white)

Procedures:

Before juice time a tag will be given to each child. The teacher may say,

> WHEN YOU'RE ALL CLEANED UP ...or WHEN YOU HAVE WASHED YOUR HANDS ...or WHEN YOU FINISH PLAYING WITH THAT TOY ... YOU MAY HAVE A TICKET FOR JUICE. YOU MAY SIT IN A CHAIR THAT HAS A TICKET LIKE YOURS. THERE ARE TWO KINDS OF TICKETS BUT ALL THE CHILDREN GET TO HAVE JUST ONE TICKET. IT WILL BE RED LIKE THIS ONE (show children) OR WHITE LIKE THIS ONE (show children). WHEN YOU GET YOUR TICKET YOU MAY FIND YOUR CHAIR AND SIT DOWN. AFTER YOU SIT DOWN, A TICKET MAN WILL COME AROUND AND PICK UP YOUR TICKETS AND SAVE THEM FOR TOMORROW.
>
> Other comments may be: I GET TO DECIDE WHAT COLOR TICKET YOU GET. SOME OTHER TIME YOU WILL HAVE A DIFFERENT COLOR ... BE VERY CAREFUL WITH THE TICKETS SO THEY WON'T TEAR. WE HAVE TO SAVE THEM FOR TOMORROW ... GOOD FOR YOU, YOU'RE READY FOR JUICE; HERE'S YOUR TICKET. I WANT YOU TO HOLD ONTO IT.

While the children are cleaning up, or some other convenient time, an adult should check the tables to be certain the tagged chairs are alternated. At the table talk about the children that sit on either side of each child. Name them and have the children name them as well. Have

each child name his neighbors. Talk about the tickets. Ask what the tickets mean.

> THEY MEAN YOU HAVE FINISHED CLEANING UP. WHEN YOU CLEAN UP THE TOYS ARE ON THE SHELVES FOR ALL THE CHILDREN TO PLAY WITH SOME OTHER TIME ... IT MEANS YOU'VE WASHED YOUR HANDS AND THEY ARE CLEAN, THEN DIRT WON'T GET ON YOUR SNACK.

The teacher could talk about the physical properties of the tickets.

> THEY ARE ROUND. WHAT ELSE IN THE ROOM IS ROUND LIKE THE TICKETS? IT HAS A PIECE OF SHINY METAL AROUND THE EDGE, etc.

The central purpose of the activity is physical proximity between children of different subcultural groups. The proximity obviously increases the chance for social interactions between these children. The ticket may serve as a reinforcement for cooperative task completion (i.e. cleaning up the classroom for juice time).

Children will be assigned red or white tickets according to the following schedule:

Monday	Tuesday	Wednesday	Thursday
Red-- low income	Red-- Black children	Red-- boys	Children may choose any ticket.
White-- middle income	White-- White children	White-- girls	

SOCIODRAMATIC PLAY ACTIVITY

Learning Experience: Doctor's Office

Objectives:

1. To help the child develop skill in initiating interactions with others.

2. To help the child develop skill in responding to the interactive attempts of others.

3. To help the child develop skill in dealing with the unfamiliar behavior of others.

4. To help the child develop the self-control necessary to allow others to continue toward their goals.

5. To help the child develop skill in working with others toward a mutual goal.

Materials: Doctor's Office

stethoscopes (2)
syringes (2)
gauze strip bandages
tape
splints (2)
cotton balls
doctor's bags (2)
cots (2) or beds taped off on the floor with masking tape
pillows (2)
blankets (2)
scale
play thermometers
small flashlights
shirts (white longsleeved, 2) for patients
shirts (white shortsleeved, 2) for doctors

Materials: Waiting Room

chairs (3 or 4)
magazines on shelf
simple toys
story books about doctors and nurses

Procedures:

In order to be certain all the children are familiar with the props that will be used in the dramatic play area, the props will be presented

to the children in planned activities the week prior to the actual Doctor's Office dramatic play activity. This is done so that the children will have time to explore and manipulate the props before being expected to use them in a dramatic play situation.

The actual Doctor's Office should be set up in a separate dramatic play area. It should not take the place of the regular housekeeping area. The props should be set up before the children arrive. The number of children playing in the Doctor's Office will be limited to 4 at a time. There will be only 4 shirts (2 doctor's and 2 patient's). However, there may be a small "waiting room" where a few other children can read books while waiting to see the doctors. As a patient leaves the doctors' office, he gives his shirt to another patient in the waiting room.

One of the teacher's most important roles will be to model and explain appropriate role behavior of doctors and patients for the children. Sometimes the teacher will only have to give a suggestion, other times she may have to put herself into the role and pretend she is a patient or doctor. This will probably vary with the group of children playing in the area. No matter what the methods the teacher uses, the main goal is to get the children to play in cooperation with each other and to pursue interactions with each other.

Following are suggested statements for the teacher to make according to the situation. The child may be outside of the dramatic play and need an entrance. He may be in the ongoing play and need help in continuing the play, or the child may need an exit from the play.

Suggested teacher interactions:

Entrance to play situation:

1. YOUR BABY DOESN'T LOOK VERY WELL TODAY. HAS SHE BEEN EATING? I THINK YOU SHOULD TAKE HER TO A DOCTOR. COMME ON, I'LL GO WITH YOU.

2. SCHOOL'S STARTING NEXT WEEK FOR YOUR CHILDREN. HAVE YOU MADE AN APPOINTMENT WITH THE DOCTOR FOR A CHECK-UP FOR THEM? I'LL HELP YOU MAKE THE APPOINTMENT. LET'S GO SEE (OR CALL) YOUR DOCTOR.

3. BEFORE I GO TO WORK TODAY, I BETTER GET A CHECK-UP. DOCTOR, I NEED A CHECK-UP. WHEN CAN YOU SEE ME?

4. DO YOU THINK I NEED A SHOT TO STAY WELL? BEFORE I LEAVE CAN YOU WEIGH ME?

Continuance of play:

1. NURSE, PLEASE WEIGH AND MEASURE THIS PATIENT; THEN SEND HIM INTO SEE THE DOCTOR.

2. DOCTOR, I NEED HELP FIXING THIS PATIENT. WOULD YOU HELP ME WITH THIS BANDAGE?

3. BUT DOCTOR, YOU BETTER ASK HIM IF THERE'S ANYTHING ELSE WRONG WITH HIM.

4. BUT DOCTOR, AREN'T YOU GOING TO TELL THE PATIENT WHAT MEDICINE HE NEEDS TO TAKE HOME?

Exit from play situation:

1. I THINK YOUR BABY WILL BE OK NOW. YOU CAN TAKE HER HOME NOW.

2. I'M DONE WITH YOUR CHECK-UP. IT'S OK FOR YOU TO GO BACK TO WORK.

3. IT'S YOUR TURN TO HAVE A DAY OFF. (to child playing doctor).

4. DOCTOR, PLEASE FINISH WITH THAT PATIENT. YOU HAVE OTHER PATIENTS TO SEE.